

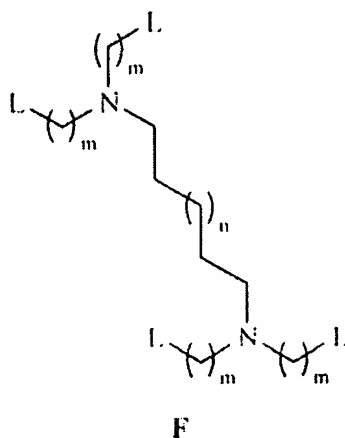
Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

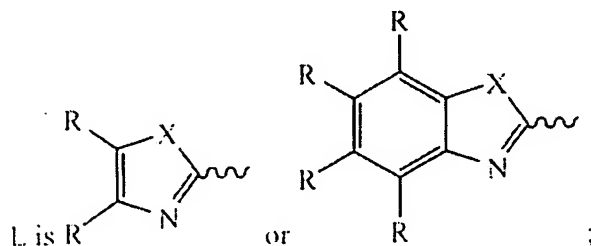
Listing of Claims:

1-57. (Canceled)

58. (Withdrawn-Currently Amended) A compound of formula F:



wherein, independently for each occurrence,



X is $-N(R^2)-$, $-O-$, or $-S-$;

R is halogen, alkyl, alkenyl, alkynyl, hydroxyl, alkoxyl, acyl, acyloxy, acylamino, silyloxy, amino, nitro, sulfhydryl, alkylthio, imino, amido, phosphoryl, phosphonate, phosphine, carbonyl, carboxyl, carboxamide, anhydride, silyl, thioalkyl, alkylsulfonyl, arylsulfonyl, selenoalkyl, ketone, aldehyde, ester, heteroalkyl, cyano, guanidine, amidine, acetal, ketal, amine oxide,

aryl, heteroaryl, aralkyl, heteroaralkyl, azido, aziridine, carbamoyl, epoxide, hydroxamic acid, imide, oxime, sulfonamide, thioamide, thiocarbamate, urea, thiourea, or $-(CH_2)_d-R_{80}$:

R_{80} is carboxaldehyde, carboxylate, carboxamido, alkoxycarbonyl,

aryloxy carbonyl, ammonium, aryl, heteroaryl, cycloalkyl, cycloalkenyl,

heterocyclyl, polycyclyl, amino acid, peptide, saccharide, ribonucleic acid, or (deoxy)ribonucleic acid;

R_2 is H or a lipophilic group;

d is an integer in the range 0 to 12 inclusive;

m is an integer in the range 0 to 6 inclusive; [[and]]

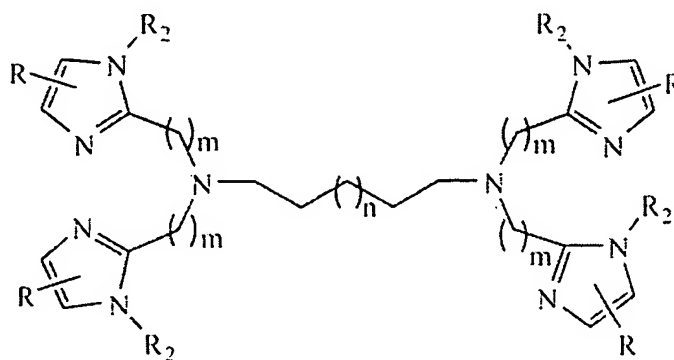
n is an integer in the range 0 to 6 inclusive; and

the compound is complexed with a radionuclide.

59. (Canceled)

60. (Withdrawn) The compound of claim 58, wherein the compound is complexed with a radionuclide, wherein the radionuclide is technetium or rhenium.

61. (Withdrawn-Currently Amended) A compound of formula G:



G

wherein, independently for each occurrence,

R is absent or present 1 or 2 times;

R is halogen, alkyl, alkenyl, alkynyl, hydroxyl, alkoxy, acyl, acyloxy, acylamino, silyloxy, amino, nitro, sulfhydryl, alkylthio, imino, amido, phosphoryl, phosphonate, phosphine, carbonyl, carboxyl, carboxamide, anhydride, silyl, thioalkyl, alkylsulfonyl, arylsulfonyl, selenoalkyl, ketone, aldehyde, ester, heteroalkyl, cyano, guanidine, amidine, acetal, ketal, amine oxide, aryl, heteroaryl, aralkyl, heteroaralkyl, azido, aziridine, carbamoyl, epoxide, hydroxamic acid, imide, oxime, sulfonamide, thioamide, thiocarbamate, urea, thiourea, or $-(CH_2)_d-R_{80}$;

R_{80} is carboxaldehyde, carboxylate, carboxamido, alkoxycarbonyl, aryloxy, carbonyl, ammonium, aryl, heteroaryl, cycloalkyl, cycloalkenyl, heterocyclyl, polycyclyl, amino acid, peptide, saccharide, ribonucleic acid, or (deoxy)ribonucleic acid;

R_2 is H or a lipophilic group;

d is an integer in the range 0 to 12 inclusive;

m is an integer in the range 0 to 6 inclusive; [[and]]

n is an integer in the range 0 to 6 inclusive; and

the compound is complexed with a radionuclide.

62. (Canceled)

63. (Withdrawn-Currently Amended) The compound of claim 61, ~~wherein the compound is complexed with a radionuclide,~~ wherein the radionuclide is technetium or rhenium.

64. (Withdrawn) The compound of claim 61, wherein m is 1.

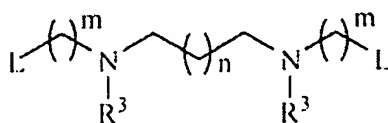
65. (Withdrawn) The compound of claim 61, wherein n is 1.

66. (Withdrawn) The compound of claim 61, wherein m is 1; and n is 1.

67. (Withdrawn) The compound of claim 61, wherein R is absent.

68. (Withdrawn) The compound of claim 61, wherein R_2 is a lipophilic group.

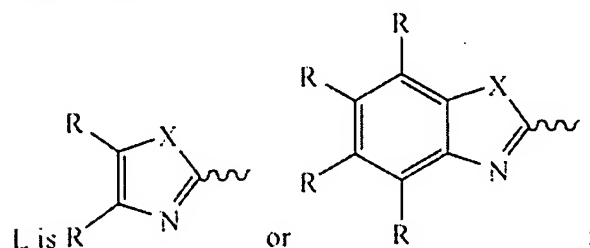
69. (Withdrawn) The compound of claim 61, wherein R_2 is an ether, aralkyl, or alkylaryl.
70. (Withdrawn) The compound of claim 61, wherein R is absent; and R_2 is an ether, aralkyl, or alkylaryl.
71. (Withdrawn) The compound of claim 61, wherein m is 1; n is 1; R is absent; and R_2 is an ether, aralkyl, or alkylaryl.
72. (Withdrawn-Currently Amended) The compound of claim 61, wherein m is 1; n is 1; R is absent; and R_2 is an ether, aralkyl, or alkylaryl; ~~wherein the compound is complexed with a radionuclide.~~
73. (Withdrawn-Currently Amended) The compound of claim 61, wherein m is 1; n is 1; R is absent; ~~[[and]]~~ R_2 is an ether, aralkyl, or alkylaryl; ~~wherein the compound is complexed with a radionuclide; and~~ wherein said radionuclide is technetium or rhenium.
74. (Currently Amended) A compound of formula II:



II

wherein: [[.]]

independently for each occurrence,



X is $-N(R^2)-$ or $-O-$;

R is halogen, alkyl, alkenyl, alkynyl, hydroxyl, alkoxyl, acyl, acyloxy, acylamino, silyloxy, amino, nitro, sulfhydryl, alkylthio, imino, amido, phosphoryl,

phosphonate, phosphine, carbonyl, carboxyl, carboxamide, anhydride, silyl, thioalkyl, alkylsulfonyl, arylsulfonyl, selenoalkyl, ketone, aldehyde, ester, heteroalkyl, cyano, guanidine, amidine, acetal, ketal, amine oxide, aryl, heteroaryl, aralkyl, heteroaralkyl, azido, aziridine, carbamoyl, epoxide, hydroxamic acid, imide, oxime, sulfonamide, thioamide, thiocarbamate, urea, thiourea, or $-(CH_2)_d-R_{80}$:

R_{80} is independently for each occurrence carboxaldehyde, carboxylate, carboxamido, alkoxy carbonyl, aryloxy carbonyl, ammonium, aryl, heteroaryl, cycloalkyl, cycloalkenyl, heterocyclyl, polycyclyl, amino acid, peptide, saccharide, ribonucleic acid, or (deoxy)ribonucleic acid;

R_2 is H or a lipophilic group;

R_3 is a moiety comprising a neutral or anionic Lewis base, H, alkyl, hydroxyalkyl, alkoxyalkyl, aminoalkyl, thioalkyl, alkenyl, alkynyl, aryl, heteroaryl, aralkyl, heteroaralkyl, acyl, aminoacyl, hydroxyacyl, thioacyl, (amino)alkoxy carbonyl, (hydroxy)alkoxy carbonyl, (amino)alkylaminocarbonyl, (hydroxy)alkylaminocarbonyl, $-CO_2H$, $-(CH_2)_d-R_{80}$, or an amino acid radical;

d is an integer in the range 0 to 12 inclusive;

m is an integer in the range 0 to 6 inclusive; [[and]]

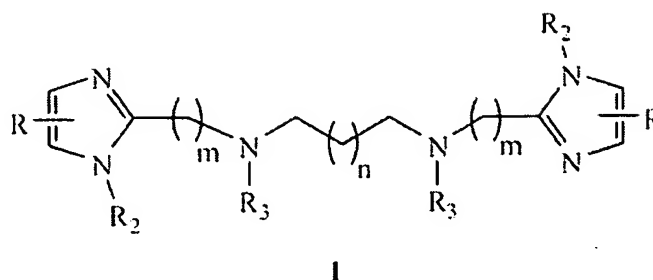
n is an integer in the range 0 to 6 inclusive; and

the compound is complexed with a radionuclide.

75. (Canceled)

76. (Currently Amended) The compound of claim 74, wherein ~~the compound is complexed with a radionuclide, wherein the~~ radionuclide is technetium or rhenium.

77. (Withdrawn-Currently Amended) A compound of formula I:



wherein, independently for each occurrence,

R is absent or present 1 or 2 times;

R is halogen, alkyl, alkenyl, alkynyl, hydroxyl, alkoxyl, acyl, acyloxy, acylamino, silyloxy, amino, nitro, sulfhydryl, alkylthio, imino, amido, phosphoryl, phosphonate, phosphine, carbonyl, carboxyl, carboxamide, anhydride, silyl, thioalkyl, alkylsulfonyl, arylsulfonyl, selenoalkyl, ketone, aldehyde, ester, heteroalkyl, cyano, guanidine, amidine, acetal, ketal, amine oxide, aryl, heteroaryl, aralkyl, heteroaralkyl, azido, aziridine, carbamoyl, epoxide, hydroxamic acid, imide, oxime, sulfonamide, thioamide, thiocarbamate, urea, thiourea, or $-(CH_2)_d-R_{80}$;

R_{80} is carboxaldehyde, carboxylate, carboxamido, alkoxycarbonyl, aryloxy carbonyl, ammonium, aryl, heteroaryl, cycloalkyl, cycloalkenyl, heterocyclyl, polycyclyl, amino acid, peptide, saccharide, ribonucleic acid, or (deoxy)ribonucleic acid;

R_2 is H or a lipophilic group;

R_3 is a moiety comprising a neutral or anionic Lewis base, H, alkyl, hydroxyalkyl, alkoxyalkyl, aminoalkyl, thioalkyl, alkenyl, alkynyl, aryl, heteroaryl, aralkyl, heteroaralkyl, acyl, aminoacyl, hydroxyacyl, thioacyl, (amino)alkoxycarbonyl, (hydroxy)alkoxycarbonyl, (amino)alkylaminocarbonyl, (hydroxy)alkylaminocarbonyl, $-CO_2H$, $-(CH_2)_d-R_{80}$, or an amino acid radical;

d is an integer in the range 0 to 12 inclusive;

m is an integer in the range 0 to 6 inclusive; [[and]]

n is an integer in the range 0 to 6 inclusive; and

the compound is complexed with a radionuclide.

78. (Canceled)

79. (Withdrawn-Currently Amended) The compound of claim 77, ~~wherein the compound is complexed with a radionuclide;~~ wherein the radionuclide is technetium or rhenium.

80. (Withdrawn) The compound of claim 77, wherein m is 1.

81. (Withdrawn) The compound of claim 77, wherein n is 1.

82. (Withdrawn) The compound of claim 77, wherein m is 1; and n is 1.

83. (Withdrawn) The compound of claim 77, wherein R is absent.

84. (Withdrawn) The compound of claim 77, wherein R₂ is a lipophilic group.

85. (Withdrawn) The compound of claim 77, wherein R₂ is an ether, aralkyl, or alkylaryl.

86. (Withdrawn) The compound of claim 77, wherein R₃ is a moiety comprising an anionic Lewis base.

87. (Withdrawn) The compound of claim 77, wherein R₃ is a carboxylate, thiolate, or phenolate.

88. (Withdrawn) The compound of claim 77, wherein R is absent; and R₂ is an ether, aralkyl, or alkylaryl.

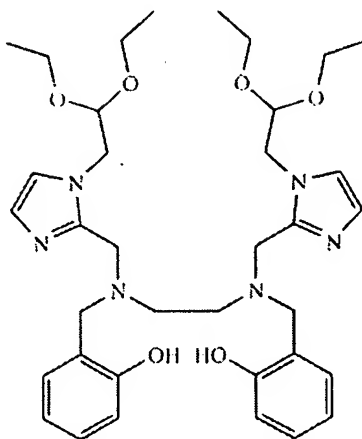
89. (Withdrawn) The compound of claim 77, wherein R is absent; R₂ is an ether, aralkyl, or alkylaryl; and R₃ is a carboxylate, thiolate, or phenolate.

90. (Withdrawn) The compound of claim 77, wherein m is 1; n is 1; R is absent; and R₂ is an ether, aralkyl, or alkylaryl.

91. (Withdrawn) The compound of claim 77, wherein m is 1; n is 1; R is absent; R₂ is an ether, aralkyl, or alkylaryl; and R₃ is a carboxylate, thiolate, or phenolate.
92. (Withdrawn-Currently Amended) The compound of claim 77, wherein m is 1; n is 1; R is absent; and R₂ is an ether, aralkyl, or alkylaryl; ~~wherein said compound is complexed with a radionuclide.~~
93. (Withdrawn-Currently Amended) The compound of claim 77, wherein m is 1; n is 1; R is absent; R₂ is an ether, aralkyl, or alkylaryl; and R₃ is a carboxylate, thiolate, or phenolate; ~~wherein the compound is complexed with a radionuclide.~~
94. (Withdrawn-Currently Amended) The compound of claim 77, wherein m is 1; n is 1; R is absent; and R₂ is an ether, aralkyl, or alkylaryl; ~~wherein the compound is complexed with a radionuclide;~~ and wherein the radionuclide is technetium or rhenium.
95. (Withdrawn-Currently Amended) The compound of claim 77, wherein m is 1; n is 1; R is absent; R₂ is an ether, aralkyl, or alkylaryl; and R₃ is a carboxylate, thiolate, or phenolate; ~~wherein the compound is complexed with a radionuclide;~~ and wherein the radionuclide is technetium or rhenium.
- 96-132. (Canceled)
133. (Previously Presented) A formulation, comprising a compound according to any of claims 58, 61, 74, or 77; and a pharmaceutically acceptable excipient.
134. (Withdrawn-Currently Amended) A method of imaging a region in a patient, comprising the steps of: administering to a patient a diagnostically effective amount of a compound of claim 58[[59]], 60, 61[[62]], 63, 72, 73, 74[[75]], 76, 77[[78]], 79, or 92-95; and obtaining an image of said region of said patient.
135. (Withdrawn) The method of claim 134, wherein said region of said patient is the head or thorax.

136. (Canceled)

137. (NEW) A compound represented by the following formula:



138. (NEW) The compound of claim 137, wherein the compound is complexed with a radionuclide.

139. (NEW) The compound of claim 138, wherein the radionuclide is technetium or rhenium.

140. (NEW) A formulation, comprising a compound according to claim 137; and a pharmaceutically acceptable excipient.

141. (NEW) A method of imaging a region in a patient, comprising the steps of: administering to a patient a diagnostically effective amount of a compound of claim 138 and obtaining an image of said region of said patient.

142. (NEW) A method of imaging a region in a patient, comprising the steps of: administering to a patient a diagnostically effective amount of a compound of claim 139 and obtaining an image of said region of said patient.